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# ABSTRACTS OF TUBERCULOSIS

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**Determination of Gold in Tissues.**—In healthy guinea pigs and mice gold granules were found at the site of injection. In the kidney they appeared in the form of large amorphous flakes, being located within as well as between the tubules, and in the endothelia of the glomeruli. They also were found in the intestines, the pulmonary histiocytes, and the Kupffer cells of the liver. In tuberculous animals the deposits differed essentially in that the tuberculous organs retained relatively larger amounts, but not the tuberculous foci themselves. As indicating the retention of gold in tuberculous animals, as compared to the normal, is its scanty deposit in the kidneys of the former. The method used for the determination of gold was to fix the pieces of tissue in a mixture of 10 per cent formalin and 5 per cent zinc-chloride solution in water for two to three days, after which frozen or paraffine sections were placed in zinc chloride at 60° for 5 to 6 days and finally were placed for 15 to 20 minutes in boiling zinc chloride. The gold was revealed as brown or black granules.—*Ein mikrochemischer Goldnachweis im Gewebe, E. Christeller, Centralbl, f. allg. Path., 1927, xl, 173 & 180.*—(*H. J. C.*)

**Gold in Organs in Tuberculosis.**—Gold was found in sections of the organs of 6 cases of phthisis treated with sanocrysin and examined by the Kurosu zinc-chloride reaction. In contrast to the experimental animal the main depot in man is the liver. A positive reaction is also obtained in the blood and, even though in slight amount, also in the intestines (in the crypts of Lieberkühn and the submucosal connective tissue). In one of the cases examined the muscles proved to be free from gold. There was no definite determinable relation between the tuberculous disease process and the type of deposit of gold. A measure of the deposit in the lungs was difficult of determination since the gold could not be distinguished from coal pigment.—*Untersuchungen mit der mikrohistochemischen Goldreaktion an Organen sanocrysinbehandelter Tuberkulöser, J. A. Gallinal, Ztschr. f. Tuberk., 1927, xlviii, 433.*—(*H. J. C.*)

**Treatment with Sanocrysin.**—Fifty patients with pulmonary tuberculosis were treated with sanocrysin. Sixteen were clinically arrested one year after treatment, and up to the present time have not relapsed. Twelve improved, but are not clinically arrested; 5 improved under treatment, but have since relapsed; 10 showed no improvement under treatment, but are not worse; 2 were made much worse by the treatment; and 5 died as a result of the treatment. The results of treatment are not sufficiently certain to warrant the use of sanocrysin before routine or collapse therapy has been tried. Certain patients have made remarkable progress, and the majority improved, but the action of the drug is so irregular that it is impossible to predict a good result in every case.—*Further Results with Sanocrysin in Pulmonary Tuberculosis, F. Heaf, Tubercle, December, 1927, ix, 105.*—*(W. I. W.)*

**Sanocrysin in Pulmonary Tuberculosis.**—The results are recorded in 10 cases which had been treated with sanocrysin a number of years previously. The roentgenographs revealed the cases as having been severe and prognostically unfavorable originally, but surprisingly favorably influenced by the sanocrysin treatment as shown in the second roentgenograph.—*Beitrag zur Beurteilung der Wirkung des Sanocrysins gegen Lungentuberkulose, J. Gravesen, Beitr. z. Klin. d. Tuberk., 1927, lxvi, 117.*—*(H. J. C.)*

**Sanocrysin in Experimental Tuberculosis.**—Intravenous sanocrysin treatment in rabbits, intravenously infected with virulent tubercle bacilli, resulted in a beneficial effect on the tuberculosis. After moderately virulent infection treatment was begun at a stage when the controls had macroscopic pulmonary tuberculosis. The treated animals, examined a half to one year after infection, had healed calcified and encapsulated foci. In the case of markedly virulent infection, treatment was begun when the controls had microscopic foci in the organs. Although the controls began to die seventeen days after treatment, the treated animals were still free from macroscopic disease after three months, and nine-tenths of the lungs, tested by guinea-pig inoculation, proved to be free from tuberculosis. The mildly infected animals reacted severely to the sanocrysin in the form of shock and loss of weight. In the markedly infected animals these symptoms were lacking. Metallic poisoning seems unlikely as the cause of albuminuria and shock. The animals infected with highly virulent tuberculosis tolerated larger doses of sanocrysin than those with milder infections. The inhibitory effect upon the growth of tubercle bacilli varied between concentrations of 1:25 to 1:500,000, depending upon the strain and type of culture. The active substance of the sanocrysin is probably a product of transformation. The bacillotropy of the sanocrysin is indicated by a more intense staining of bacilli grown on sanocrysin-containing medium, as well as the greater gold content of tuberculous lungs. Negative results obtained when treatment was begun coincidently with infection.—*Die Sanocrysinbehandlung bei experimenteller Tuberkulose, I. Mitt. Kaninchentuberkulose, T Madsen and J. R. Mörch, Ztschr. f. Hyg., 1927, cvii, 169.*—*(H. J. C.)*

**Sanocrysin in Experimental Tuberculosis.**—Rabbits were given intravenous infections of tubercle bacilli. Six weeks later, after a chronic type of tuberculosis had developed, 1 to 2 cgm. of sanocrysin per kgm. body weight was given at intervals of eight days. No differences were found between the treated and untreated animals, as far as appetite, body weight and duration of life were concerned. Macroscopic and microscopic findings, seven and ten and a half months after infection, also showed no appreciable differences. Fibrous changes appeared to occur more frequently in the treated animals but they were also present in the untreated. The differences between these findings and those of Moellgaard are attributed to the low virulence of the strain used by the latter.—*Der Einfluss des Sanocrysins auf die experimentelle Kaninchentuberkulose, Opitz, Kotzulla and Wätjen, Beitr. z. Klin. d. Tuberk., 1927, lxvi, 441.*—*(H.J.C.)*

**Sanocrysin in Experimental Tuberculosis.**—Sanocrysin was tested on healthy and tuberculous guinea pigs. The toxic action of gold in tuberculous animals depended upon differences of individual resistance. There was no striking susceptibility of tuberculous animals to sanocrysin, and the death of these animals was, exactly as in healthy animals, due to metallic intoxication, not to toxaemia or tuberculin shock. The calf immune serum exerts no neutralizing action against tuberculin substances and does not protect guinea pigs against tuberculin shock. The drug did not have curative effects.—*Über die Wirkung des Sanocrysins und des Serums von Moellgaard am Meerschweinchen, K. Weise and E. Jakobssohn, Beitr. z. Klin. d. Tuberk., 1927, lxvi, 144.*—*(H. J. C.)*

**Chemotherapy with Walbum's Metallic Salts.**—Suitable minimal injections of metallic salts protected rats against infection with virulent "*Rattenbacillen*" and guinea pigs against infection with mildly virulent tubercle bacilli. A *therapia sterilisans* toward virulent tetanus spores in mice can be attained by means of small amounts of manganese salts in an indirect manner. While a latent tetanus-spore infection in mice can be activated by a subsequent staphylococcus inoculation, the same animals remain healthy after treatment with suitable amounts of manganese. Planted on media, the organs of these mice, after one injection, revealed the spores still alive but one injection would inhibit the development of tetanus following the injection with staphylococci. Like inhibitory effects resulted in guinea pigs infected with a mildly virulent strain of tubercle bacilli and treated with suitable doses of salts (usually the chloride) of tungsten, platinum, erbium, barium, aluminum, lanthanium, cerium, selenium, cadmium, molybdenum, and ruthenium. Like results were got in rabbits infected with a highly virulent strain of bovine tubercle bacilli and treated with cadmium, manganese, lanthanium and cerium. The organs were tested by guinea-pig inoculation. Large doses of metallic salts depress the protective mechanism and cause a more rapidly fatal outcome. The theoretical basis of chemotherapy according to Ehrlich (the direct and specific effect on the causative microörganism), so far as it concerns bacterial diseases, is considered incorrect. Rather the aim should be to stimulate the sterilizing energy of the body. —*Metallsalztherapie. Sterilisations des infizierten Organismus* (*Tetanus und Tuberkulose*), *L. E. Walbum, Ztschr. f. Tuberk., 1927, xlviii, 193.*—(*H. J. C.*)

**Chemotherapy with Walbum's Metallic Salts.**—The author reports 115 cases of pulmonary tuberculosis treated with the "*Metallosal-Mangan*" injections of Walbum. The cases were relatively severe type, a number of which had outspoken fever at the beginning of treatment. Definite general as well as focal reactions were observed. The temperature dropped and became normal, the expectoration and the bacilli was reduced, the sedimentation reaction diminished, and weight increased. In all, 66.6 per cent of those treated were improved. A definite change in the X-ray picture was not observed. No contraindications were noted. Metallic-salt therapy is to be preferred over artificial pneumothorax.—*Metallsalztherapie ad modum Walbum. Erfahrungen bezüglich Mangan-behandlung der Lungentuberkulose, O. Helms and J. Frederiksen, Ztschr. f. Tuberk., 1927, xlix, 18.*—(*H. J. C.*)

**Chemotherapy with Walbum's Metallic Salts.**—An increased formation of antitoxin in the body, as well as an increase of bacteriolysins, is caused by the metallic salts. In this respect cadmium is especially active. The optimal dose is variable for the individual, and therefore small doses are essential, with careful observations of the temperature curve and of reactions on the part of the lymphatic system, the pleura and peritoneum, as well as the weight.—*Behandlung von Lungentuberkulose mit Metallsalz en nach der von Dr. Walbum angegebenen Methode. Kadmium, N. Lunde, Ztschr. f. Tuberk., 1927, xlviii, 285.*—(*H. J. C.*)

**Treatment of Pulmonary Tuberculosis with Cinnamic Acid.**—The favorable influences in animal experiments, observed with cinnamic acid by Landerer depended upon two properties, first, the development of a general leucocytosis and, second, a provocative aseptic inflammation at the tuberculous focus. The far more favorable results in the human being are explained by the immunobiologic relation developed in comparison with the animals. The author reports experiences with *Elbon-Ciba* (cinnamoyl-paraoxyphenyl-urea) which after resorption and the addition of water, splits into cinnamic acid and oxyphenyl-urea. While Landerer aimed at a more specific irritation by massive dosage, the author used a protracted administration of the drug, thus continually "benzoylizing" the blood and tissues. As a result, the sputum was favorably influenced, and the temperature declined. Especially suitable for this treatment are all cases with prolonged fever, (exclusive of septic fever) and outspoken exudative forms, as well as afebrile cases with profuse secretion and large numbers of bacilli. The drug is administered initially from 4 to 5 gm. daily to a maximum of 8 gm., and, after the disappearance of symptoms, continued for four to six weeks with a daily dose of 2 gm.—*Über alte und moderne Zimtsäurebehandlung der Lungentuberkulose, T. Sternberg, Ztschr. f. Tuberk., 1927, xlviii, 309.*—(*H. J. C.*)

**Treatment of Advanced Pulmonary Tuberculosis with Hexeton.**—*Hexeton*, a preparation of camphor, was given intravenously in 1 per cent solution, beginning with 0.01 daily, later at bidaily and then tridaily intervals, and until a total of 50 injections had been reached. The injections were

painless, and the only unpleasant effect was a camphor taste following them. Severe bilateral cases were treated satisfactorily, especially when manifesting circulatory disturbances such as diminished blood-pressure or accelerated pulse. Advantages of *Hexeton* over camphorated oil are its purer form, the possibility of its more rapid injection without danger or local irritation, and its prompter action on the body.—*Über die Campherbehandlung des Spätstadiums der Lungentuberkulose mit Hexeton, R. Michel, Beitr. z. Klin. d. Tuberk., 1927, lxvii, 577.*—(*H. J. C.*)

**Treatment of Pulmonary Tuberculosis with Morrhuates.**—Chemotherapy of pulmonary tuberculosis has been in eclipse for several years, since the failure of the salts of the rare earths. The success in the treatment of leprosy by chaulmoogra oil and its derivatives showed that it was possible to attack directly acid-fast bacilli in the tissues, and that disintegration of Hansen's bacillus could be achieved, while Moellgard's work confirmed hopes of reaching the tubercle bacillus likewise. Up to a certain point there is an analogy between the two diseases: both cause decalcification, the biological reactions produced are somewhat similar, both cause diminution in blood lipase, and both oppose a waxy coating to the defensive reactions of the body. However, the evolution and clinical signs of the two diseases, and their pathological anatomy, are absolutely different. Of the two groups of pathogenic acid-fast bacilli, that of tuberculosis has a necrosing action and provokes a complicated cellular defense, while that of leprosy develops and multiplies within the cells, pushing back the nucleus and distending the cytoplasm. Reactions are hardly to be feared in leprosy, but they are always redoubtable in pulmonary tuberculosis. Fear of these reactions to chaulmoogra oil and its derivatives led Rogers to prepare sodium morrhuate, as a substitute for the chaulmoogric acid derivatives in tuberculosis. The softening of a tuberculous lesion may provoke a dangerous microbic mobilization, for which reason the chaulmoogric-acid salts were abandoned. Sodium morrhuate is actually the salt of the combined fatty acids of codliver oil after ether extraction, and it has a complex formula. It is of yellow crystalline form, changing rapidly to a brown malodorous mass, is easily soluble in distilled water, giving a clear solution, which is unstable. Sterilization does not prevent alterations of a chemical nature. Hence, the preparation must be renewed at least twice a week and sterilized. Boelke is highly enthusiastic and greatly impressed by the results of its use in tuberculosis. Therasse has been impressed, but otherwise than favorably. Of 50 tuberculosis patients treated by morrhuate only 2 could be said to have derived benefit; in this respect it is inferior to tuberculin. Focal reactions are always to be feared, and often occur without warning. Several patients showed bloody sputum after each injection, and there is no doubt that congestion of the pulmonary lesions occurs. Treatment by morrhuates demands most delicate watchfulness, difficult to realize in practice. Certain soaps, it is recalled, are haemolytic, especially sodium oleate. Experimental treatment of tuberculous guinea pigs by sodium morrhuate yielded negative results, and the site of injection often became ulcerated. The results of clinical trial in the East Indies have been disappointing. Recently Grigaut and Tardieu have proposed the substitution of ethyl morrhuate, and Pomaret has combined the chaulmoogric ethyl ester with the morrhuic, under the name of ethyl chaulmorrhuate. Intramuscular injections of 2 to 3 cc. are given twice a week. There is little reason to think that ethyl morrhuate is free from the disadvantages of sodium morrhuate. The mode of action of both, in so far as favorable effects are concerned, is doubtless indirect, probably by increasing the blood and cellular lipases. These probably attack the waxy capsule of the bacillus. Calmette has demonstrated such an increase following injection of neutral fats, but it did not increase resistance to infection. At present various institutes are studying further the chaulmoogrates and morrhuates.—*Les morrhuates dans le traitement de la tuberculose pulmonaire, G. Therasse, Rev. Belge d. l. Tuberc., January, 1926, xvii, 1.*—(*A. P.*)

**Treatment of Pulmonary Tuberculosis with Helpin.**—Exudative cases of pulmonary tuberculosis were improved by *Helpin*, a lecithin-glycerine emulsion containing the electrolytes, sodium chloride, calcium chloride, potassium chloride and sodium bicarbonate. Proliferative cases yielded the best results when treatment included fresh air, rest, and an irritant therapy of either tuberculin, gold, or other substances. Indurative cases are to be treated with *Helpin* when metabolism and digestion are below par. Focal reactions and increased temperature were never observed, nor were unfavorable changes in the blood pictures obtained.—*Zur Behandlung der Lungentuberkulose mit Lipoiden, T. Sternberg, Beitr. z. Klin. d. Tuberk., 1927, lxvi, 635.*—(*H. J. C.*)

**Treatment of Pulmonary Tuberculosis with Helpin.**—Predominantly productive forms of pulmonary tuberculosis were submitted to the lipoid treatment with *Helpin*,

which was well tolerated, both intramuscularly and intravenously. There resulted a marked effect on the general well-being, with marked increases in weight, even in patients that were constitutionally difficult to benefit. In many cases there was a total disappearance of symptoms of activity, and the sputum became free from bacilli. The increased resistance of the body was also indicated by a change in the blood picture.—*Klinische Erfahrungen mit Helpin, H. G. Selter, Ztschr. f. Tuberk., 1927, xlix, 266.*—**(H. J. C.)**

**Gerson's Diet in Pulmonary Tuberculosis.**—Severe tuberculosis requires between 4,000 and 4,500 calories, while the Gerson diet contains only 2,860. The diet in the sanatorium at Ronsdorf consists of 160 gm. fat, 500 gm. carbohydrate, and 120 gm. protein, while the Gerson-diet content is 160 gm. fat, 220 gm. carbohydrate and 90 gm. protein. This restricted diet is considered insufficient, especially in protein, and the ordinary sanatorium diet is sufficiently rich in vitamines. Treatment of 13 cases with the Gerson diet did not yield better results than the sanatorium diet in a single case.—*Über die Gersonsche Diät bei Lungentuberkulose, H. Schmitz, Ztschr. f. Tuberk., 1927, xlvii, 461.*—(*H. J. C.*)

**Insulin in Tuberculosis.**—Insulin was given in the form of pills according to Fonert, and as injections in the form of 24 Toronto units daily. Of 16 treated cases there were 5 with mild fibrotic phthisis, and of these 3 showed good results; of 11 advanced cases there were only 2 favorably influenced, and in 2 cases there were noted, following the insulin, pyrexia, focal reactions, and increases in the sedimentation rate.—*Über Insulinmastkuren bei Tuberkulose, S. Schönfeld, Ztschr. f. Tuberk., 1927, xlviii, 224.*—(*H. J. C.*)

**Insulin in Tuberculosis.**—The Falta and Vogt insulin treatment was of little value in 16 cases of pulmonary tuberculosis. The fattening action of insulin in the tuberculous is dependent upon water retention. Caution is essential lest, on account of hypoglycaemic reactions, complications such as haemorrhage result. Cases were excluded from this study in which there was marked pyrexia with generalized disease, or a vasomotor diathesis tending toward haemorrhage.—*Zur Behandlung der Untergewichtigkeit bei Lungentuberkulose mit Insulin, W. Herich, Ztschr. f. Tuberk., 1927, xlvii, 467.*—(*H. J. C.*)

**Insulin in Tuberculosis.**—Fattening tests on twenty-four nondiabetic cases of pulmonary tuberculosis were given with insulin, according to Sandoz's directions, in order to increase their weight. They had mainly slight clinical and roentgenological changes, and only three were with exudative elements. Febrile-toxic cases were excluded. The insulin treatment lasted 3 weeks, comprising the daily administration of 60 units given in 2 doses. The coincident use of carbohydrates prevented hypoglycaemic reactions. General or focal reactions as well as haemoptyses were never observed. The purely productive forms of disease are recommended for this type of treatment, and in these insulin is believed to be a valuable medicament.—*Mastkurversuche bei Tuberkulose mit Insulin, H. G. Zelter, Zeitschr. f. Tuberk., 1927, xlix, 35.*—(*H. J. C.*)

**Liver Extracts in Tuberculosis.**—Secondary anaemia, associated with pulmonary tuberculosis, may assume grave significance, particularly when surgical procedures are intended. The administration of arsenic and iron was usually ineffective. Liver extract was administered to a large series of patients, with much success. Haemoglobin and erythrocytes increased, polychromatophilia appeared, in some patients the relative number of lymphocytes increased, and the leucocytosis decreased, the appetite improved, and the general condition was favorably influenced.—*Über die Beeinflussung sekundärer Anämien bei Tuberkulösen durch Leberextrakte, H. F. Newton, Klin. Wchnschr., May 27, 1928, vii, 1062.*—(*M. P.*)

**Treatment of Pulmonary Tuberculosis by Reduction of Metabolism.**—In every form of pulmonary tuberculosis there is an increased metabolism and those diseases with increased basal metabolism have an unfavorable influence on the disease, which would indicate that treatment should aim at a diminution of metabolism. Jacobson's "*Acurogen*," prepared from thymus, lymph-node tissues and heart tissues, combined with iron, tannin and allylsulfid was given to 41 cases. Among 30 open cases, 8 became closed, and in 13 there was a diminution of the bacilli in the sputum. As a whole, improvement was obtained in 66 per cent of the cases. It is believed that the use of *Acurogen* results in a diminished metabolism, and thus accounts for the results obtained.—*Erfahrungen mit Acurogentherapie mittels Stoffwechseldämpfung bei Lungentuberkulose, G. Padel, Ztschr. f. Tuberk., 1927, lxviii, 301.*—(*H. J. C.*)

**Treatment of Pulmonary Tuberculosis by Reduction of Metabolism.**—Diseases with low oxidative phenomenon, such as

gout, in contrast with diabetes and Basedow's disease, have an antagonistic influence toward tuberculosis. The oxygen content of the tissues and, therefore, the possibility of oxidation is indicated by the uric acid of the blood. Nuclein-rich materials (*Acurogen*) cause an unfavorable environment (increase of uric acid) for the development of the tubercle bacillus, and a diminution of metabolism results in a slowing of the respiration and a resultant resting of the lung, so that there occurs a diminution of the bacilli in the sputum as well as a diminution of the liberation of the toxins.—*Grundlagen der Therapie der Lungentuberkulose durch Stoffwechseldämpfung, G. Jacobson, Ztschr. f. Tuberk., 1927, xliii, 299.*—(*H. J. C.*)

**Asthma.**—This study is based on an analysis of 213 cases in which the patients have been relieved of their asthma for over two years. These 213 patients are merely a part of the total of 1,074 patients on whom the end-results are known, as previously reported. The most common method of "cure" is by the elimination of or the escape from the particular substance to which the patient is hypersensitive and which, as the exciting cause (the trigger mechanism), starts the asthmatic attack. In certain cases, especially in children, the removal of this trigger mechanism can result in a permanent cure, but in most of the cases the extent of "cure" in asthma cannot be determined. Clinical "cure," including absence of symptoms even in the presence of the supposedly offending substance, can exist in spite of the fact that reactions to skin-tests are still positive; consequently, positive reactions may represent past history rather than present illness. Apparent "cures" following changes in environment may be permanent in some cases. The removal of foci of infection leads to clinical "cure" in a few cases, although similar procedures do not help other patients who may later be "cured" by other means. Faulty hygiene, often the result of asthma, may apparently be associated with the cause of asthma in a considerable number of cases, so that treatment based on the principles of common-sense medicine is always important, especially as children tend to outgrow asthma, and this tendency can be assisted by good management begun as early as possible. The evidence at hand fails to suggest any definite explanation of the asthmatic state, except that the basis is immunological rather than physiological or anatomical.—*Studies in Asthma, F. N. Rackemann, Arch. Int. Med., March, 1928, xli, 346.*—(*W. I. W.*)

**Classification of Asthma.**—Asthma may be logically classified as follows: *1: Laryngotracheal or Obstructive. 2: Essential Bronchial. 3: Pulmonary or Stasis. 4: Respiratory-Centre* or so called *Cardiac Asthma.* Only the last two forms are related to cardiac disease. *Layrngotracheal Asthma:* This has been described in cases in which there develops sudden obstruction in the upper air-passages, either inflammatory or due to foreign body. Cases of croup in children fall in this group. Enlarged thymus may cause bronchial compression. The dyspnoea is usually both inspiratory and expiratory, and the finer râles of bronchial asthma are absent. *Essential Bronchial Asthma:* This depends on a sudden turgescence of the bronchial mucosa, or spasmodic contraction of the bronchial musculature. Dyspnoea is expiratory: there are wheezing breathing, with diffuse pulmonary signs, sibilant and sonorous râles, and frequently Curschmann's spirals and Charcot-Leyden crystals in the sputum. A hereditary history is usually present, or allergic conditions in the patient or his family. Eosinophilia is common. The blood pressure is low. *Pulmonary or Stasis Asthma:* This consists essentially of attacks of dyspnoea and wheezing, occurring with pulmonary congestion in cardiovalvular diseases, and is part of the clinical picture of heart-failure. The underlying heart lesions are usually mitral stenosis, auricular fibrillation, or such advanced valvular defects as develop with increasing heart-failure. Dyspnoea is often chronic, but exacerbations may develop after strain or exertion. Distressing inspiratory and expiratory dyspnoea, necessitating complete rest and recumbency, orthopnoea, wheezing and cyanosis, as well as haemoptyses, are common. There are signs of valvular involvement found, with accentuated pulmonic second sound and weak pulse. Blood-pressure is low. Sibilant moist râles are scattered over the lungs, with signs of congestion at the bases; also congestion of liver and oedema of the extremities. Vital capacity is greatly diminished. Oxygen is of considerable benefit. *Respiratory-Centre "Cardiac" Asthma:* This is due to deficient arterial systemic circulation producing central anoxaemia, dependent on propulsive weakness of left ventricle. The main conditions of its occurrence are aortic and coronary lesions, hypertension, emphysema, and chronic interstitial nephritis. Attacks are usually nocturnal, the patient awakening with suffocation, distress and pallor. He may wheeze and cough up frothy mucus. Anginal pains often occur. Extrasystoles

may also occur. The pulse is usually full and of high tension, and often shows *pulsus alternans*. Blood-pressure is usually high. Death may ensue from respiratory-centre paralysis or dilatation of the left ventricle. Morphine is of benefit in lowering the irritability of the respiratory centre to anoxaemia, but oxygen does not relieve.—*The Classification of Asthma, M. H. Kahn, New England J. M., May 17, 1928, cxcviii, 676.—(A. P.)*

**Endemic Asthma.**—An investigation of a linseed and castor-oil mill in Toledo was made because of a suspected aetiological relationship to asthmatic attacks among residents of the neighborhood. The majority of the sufferers lived within a half-mile radius of the mill, and their attacks coincided with the odor of linseed oil when the wind was in the right direction. It was found that the flaxseed was too heavy to be wind-borne, but that the mill also expressed oil from castor-beans, the resulting cake being finely ground and used as an ingredient of fertilizer, this fine pomace being odorless but capable of being carried long distances through the air. Thirty patients were investigated who had asthma at all times of the year except for a relative freedom during June, July, and August when the mill was not in operation. Further history revealed that attacks coincided with direction of the wind, and decreased with absence from the neighborhood. Tested subcutaneously with 1:100 extracts of castor-bean dust, every one of the thirty gave marked positive reactions, with some wheals 6 to 8 cm. in diameter. A few milder reactions to flaxseed were regarded as cases of multiple sensitization. Control tests with ricin were made on forty persons, all with negative results, although many of these belonged in the hypersensitive class. Two patients were given 0.01 cc. of a 1:100 castor-bean extract intracutaneously, a severe lymphangitis ensuing for several days, but, although both had suffered from almost continuous asthma before, they have remained free for several weeks.—*Endemic Asthma Due to Castor-Bean Dust, K. D. Figley and R. H. Elrod, J. Am. M. Ass., January 14, 1928, xc, 79.—(G. L. L.)*

**Treatment of Asthma with Ephedrine.**—This paper is a report of 62 cases of asthma and other conditions treated with ephedrine. Ephedrine, usually in doses of 50 mgm., three times a day, was given to a number of patients with hypotension; this was followed by a maximum increase in the systolic blood-pressure of between 9 and 46 mm. and a sustained average elevation in the systolic blood-pressure of 14.3 mm. The same increase in the systolic blood-pressure was observed in patients with normal blood-pressure and in those with asthma. The diastolic pressure changes varied between −10 mm. and + 10 mm., with some rise in most cases. It appears that the amount of rise in the systolic blood-pressure is independent of the weight of the patient, but is constant in the same patient and, within certain limits, roughly proportionate to the dose of ephedrine. Repeated administrations of ephedrine, besides increasing the blood-pressure level in these patients, imparted to some of them a feeling of strength and well-being. Ephedrine was given to two patients in a state of surgical shock. In one case the patient recovered, but, since at the same time transfusion of blood and caffeine medication were given, it is hard to tell how much was accomplished by ephedrine. The other patient died. Thirty-nine patients with asthma and twelve with hay-fever were treated with ephedrine, which served to control the attacks and, when used constantly, to avert them in many instances. Ephedrine therapy gave complete relief in 56 per cent and partial relief in an additional 24 per cent of the cases. In 8 per cent of the cases, failures were due to absence of relief, and in 12 per cent of the cases to marked untoward symptoms. Oral administration gave relief in these cases in from five to thirty minutes, and hypodermic administration acted more promptly. Compared to epinephrine, ephedrine acted more slowly and less completely; the action, however, continued much longer, and in most cases the disagreeable by-effects of epinephrine were avoided. Combination of these two drugs often produced marked untoward symptoms. Undesirable effects from ephedrine medication in the form of nausea, vomiting, nervousness, insomnia, and palpitation were encountered in 30 per cent of the cases, and in 12 per cent these symptoms were so severe that the administration of the drug had to be discontinued. Some degree of tolerance to ephedrine was obtained in at least 15 per cent of the patients. In one case of toxic erythema, spectacular recovery was obtained with ephedrine. In seven cases of urticaria, the benefit from ephedrine therapy was doubtful in two, and absent in five. Three patients with angioneurotic oedema failed to improve after the administration of ephedrine.—*Clinical Results with Ephedrine Therapy, T. L. Althausen and I. C. Schumacker, Arch. Int. Med., December 15, 1927, xl, 873.—(W. I. W.)*

**Treatment of Asthma with Epinephrine.**—The evanescent effect of epineph-

rine administered hypodermically for asthma may be overcome to a varying extent by later massage of the area in which the injection was made. Previous experiments in dogs have proved that massage of the injected area resulted in a considerable rise of blood-pressure. If repeated too soon after the blood-pressure returned to normal, this effect was not obtained, but after the lapse of a half-hour or more massage of the area again produced a considerable rise of blood-pressure. These findings were confirmed by several experiments on patients troubled with asthma following a thoracoplasty for pulmonary tuberculosis, the rise in blood-pressure and relief of symptoms being maintained by periodic massage of the area injected.—*Epinephrine: A Method of Prolonging Its Effect in Asthma and the Depression of Shock, H. Lilienthal, J. Am. M. Ass., April 14, 1928, xc, 1192.—(G. L. L.)*

**Treatment of Asthma with Peptone.**—Intravenous injections of peptone (5 per cent) up to 2.5 or 3 cc. should be given in the treatment of asthma. If, after four or five weeks but little improvement is found, peptone-agar serum (2 cc. up to 3.5 or 4 cc.) should be given by slow intravenous injections. This will, in many cases, produce excellent results. Peptone is a good desensitizer; it brings about a general tissue reaction and a leucocytic response.—*The Treatment of Asthma, A. G. Auld, Brit. Med. J., February 4, 1928, no. 3500, 171.—(W. I. W.)*

**Roentgen Ray Treatment of the Spleen in Asthma.**—The following studies were made in order to gain further insight into the influence of the spleen on allergic conditions. Eighty-one patients with asthma and associated allergic conditions were treated with small doses of roentgen ray over the spleen. Eighteen of 56 children became symptom-free, 16 were temporarily relieved, and 22 did not respond to the treatment. Three of 25 adults became symptom-free, 9 were temporarily relieved, and 13 were not improved. In other words, there were 39.4 per cent failures among the children and 52 per cent among the adults. The patients designated as "symptom-free" were under observation for a period varying from six months to more than three years. Patients less than 4 years of age showed the best results, and the treatment in patients more than 30 years of age was less effective. Patients afflicted simultaneously with tuberculosis and the chronic emphysematous type of asthma did not respond to the treatment. In cases of infantile eczema and an hypertrophied thymus, the condition did not improve. The best results were seen among the patients with a beginning allergic condition manifested by allergic bronchitis. Better results were obtained among patients with asthma who were sensitive to bacteria than among those sensitive to food, pollen and emanation. In some patients who improved the positive skin tests became negative within the first week after the treatment. As a rule, the number of eosinophiles increased immediately after the treatment and returned to normal subsequently. A relationship did not exist between the degree of eosinophilia preceding the efficacy of the irradiation of the spleen. Thirty-seven of a total of 169 exposures were followed by reactions characterized by vomiting, nausea, abdominal pain, or an asthmatic attack from one to five days after the treatment. Better results were encountered among these patients. The value of treatment is discussed, and warning is given against its indiscriminate use. The opinion is expressed that it should be applied only in cases of allergy in which the patients do not respond to the ordinary methods.—*Roentgen Ray Treatment of the Spleen in Asthma and in Related Allergic Diseases, G. L. Waldbott, Arch. Int. Med., May, 1928, xli, 5.—(W. I. W.)*

**Hereditary Allergy.**—A family of 94 persons and five generations was studied by means of histories obtained through questionnaires, in regard to the hereditary occurrence of allergic manifestations. The manifestations of allergy considered were asthma, hay-fever, vasomotor rhinitis, urticaria, angioneurotic oedema, and eczema. Twenty-three persons who were married to members of the *E.* family were used as controls. As a group of unselected normal patients, their histories were taken in the same manner as the histories of the *E.* family. In the *E.* family, 56.2 per cent of the members were allergic. Among the 23 controls, not related to the family except by marriage, only one was allergic. The results of this survey support the contention that allergy is familial in distribution. Certain forms of allergic manifestation apparently tend to be prevalent among closely related persons.—*Occurrence of Hypersensitiveness or Allergy in Five Generations of One Family, A. E. Smith, Arch. Int. Med., April 15, 1928, xli, 481.—(W. I. W.)*

**Pollen Hay-Fever.**—The results of treatment of a series of 100 patients suffering from pollen hay-fever are recorded. In all cases careful cutaneous tests were performed

with the various dilutions of the causative pollen protein, in order to determine with what dilution or strength of pollen protein the treatment should be begun. Inoculations were usually at weekly intervals, only an occasional case being treated as often as every five days. The treatment was preseasonal, for a period of from thirteen to sixteen weeks previous to the usual onset of symptoms. All have been without symptoms for a period of two years and 78 have gone three or more years without treatment. In 22 cases the cutaneous test with the causative pollen became negative; in 22 others the test was only very doubtful when treatment was discontinued; in 3 cases only the whole pollen evoked a reaction; 9 required a concentration of 1:100 or 1:500; and in 44 the cutaneous test was not markedly changed from that before treatment. In a few patients, who previously had asthmatic symptoms during their hay-fever season, there has been no occurrence of asthma since the beginning or discontinuance of treatment. The sex of the patient made no difference in the results, nor did the age of onset or duration of symptoms before treatment seem to be of any importance in prognosis. When the pollen test becomes negative, it seems to be safe to stop treatment. When it does not become negative the patient should have had at least one and preferably two seasons of complete freedom from hay-fever before treatment should be discontinued.—*One Hundred Cases of Apparently Cured Pollen Hay-Fever, I. C. Walker, J. Am. M. Ass., March 10, 1928, xc, 750.*—(*G. L. L.*)

**Pollen Allergy.**—Comparative dates are presented, showing the skin reactions to pollen extracts on patients with asthma and hay-fever, prior to and also two and four weeks after completing the usual course of pollen injections. Under the conditions outlined, there has occurred a definite diminution in skin reactivity. In numerous cases this has persisted at least four weeks after the last treatment, and it appears that prolonged treatment may extend the period to many months, especially between pollen seasons. Perennial treatment may prove to be the best method of maintaining this condition. The factors preventing such "desensitization" seem to be unrelated to age, sex, diagnosis, or previous treatments, but are probably related to individual differences or to the amount of treatment received. As a guide to treatment it is suggested that each patient be considered as an individual problem, that a minimum number of treatments, fifteen, for example, be given, after which the results of skin tests may be used to determine whether more are needed. Since pollens are included in an antigen or excluded from it on the basis of skin reactions, and this in the last analysis is our measure of systemic sensitization or nonsensitization, an attempt at "skin desensitization" seems logical and less empirical than present methods.—*Skin Reactions of Patient Before and After Treatment with Spring (Grass) Pollens, R. W. Lamson, G. Piness and H. Miller, Am. J. M. Sc., June, 1928, clxxv, 791.*—(*W. I. W.*)

**Pollen Allergy.**—Skin desensitization to fall pollens results in a majority of cases after the usual course of pollen treatments. A similar phenomenon has already been demonstrated for spring pollens. In general this desensitization persists for at least four weeks and in some cases for months or years. In not a few cases, however, the desensitization begins to disappear before or shortly after the fourth week following treatment. Factors which are considered evidence of the specificity of the skin reaction are pointed out and include duplication of results at two-week intervals, presence of consistently negative reactions in a patient who is strongly positive to closely related pollens, and the desensitization to one pollen and not to several others, or *vice versa*, as a result of treatments. Treatment with a polyvalent antigen, if it decreases the skin reaction at all, decreases it to closely related species and in many instances to pollens which are members of genera not represented in the treatment antigen. There is some tendency for the skin to become negative to all fall pollens or to none of them. The failure to engender skin reactions to certain pollens by injection of them into a person definitely skin hypersensitive to other pollens is noted for fall as it was previously for spring pollens. Correlation of skin reactions with clinical factors is not attempted in this study, but the data have been analyzed in an effort to elucidate the phenomena connected with skin reactions.—*Pollen Allergy. IV. With Special Reference to Skin Reactions Before and After Treatment with Fall Pollens, R. W. Lamson, G. Piness, and H. Miller, Am. J. M. Sc., June, 1928, clxxv, 799.*—(*W. I. W.*)

**Pollen Content of Air.**—In an attempt to account for differences in the severity of symptoms of surface allergies, such as hay-fever, asthma and eczema at different seasons and in different localities on the same day, pollen counts were made each day in different localities and in different years in Kansas City, Missouri, and compared with similar counts made in Chicago and

Oklahoma City. It was found that in March and April high peaks in the count were caused by tree pollen, one of the highest peaks before the middle of March being due to elm pollen, and others later on due to box elder, ash and sycamore. Peaks, not quite so high, in late May and June, were due to the grasses. Many peaks throughout the summer were due to the so called spores, the relation between these and hay-fever symptoms not being well studied so far. The highest peaks of the year were found during the ragweed season in August and September. Highest peaks occurred on sunny windy days, especially those following rain favorable to pollenation. Local differences in counts were due to prevailing winds. The end of the pollen season, as far as patients are concerned, does not necessarily come with frost. The pollen content of the air may remain high for weeks following destruction of weeds by drought, and then suddenly disappear following heavy rain, before the appearance of frost. The persistence of symptoms in patients late in the winter probably is due to an ordinary rhinitis, rather than to pollen allergy.—*Pollen Content of the Air: Relationship to the Symptoms and Treatment of Hay-Fever, Asthma and Eczema, W. W. Duke and O. C. Durham, J. Am. M. Ass., May 12, 1928, xc, 1529.*—(*G. L. L.*)

**Nasal and Oral Focal Sepsis.**—Case histories are given to show that sepsis of the mouth, pharynx, and nose may affect the lower respiratory tract or gastrointestinal tract: *1:* By direct spread of infection along the mucous membranes, through the larynx and trachea. *2:* By the blood-stream or lymphatics. *3:* By inhalation of septic particles or secretions, or by the swallowing of enormous numbers of microörganisms. Nasal sepsis may give rise to symptoms and signs resembling those of early apical tuberculosis, with definite signs in the lungs, particularly at the apices, which clear up when the nasal condition has been effectively treated.—*Nasal and Oral Focal Sepsis in the Etiology of Gastrointestinal and Pulmonary Infective Diseases, P. Watson-Williams, Brit. M. J., June 2, 1928, no. 3517, 931.*—(*W. I. W.*)

**Pulmonary Infections with Friedländer's Bacillus.**—For nine years a young female patient suffered from attacks characterized by prolonged expectoration with signs of bronchitis and areas presenting subcrepitant râles. The general condition was always quite satisfactory. During acute attacks the local physical signs were more marked. She had fever, and the expectoration was increased in amount and was sometimes haemorrhagic. Repeated examinations showed the sputum to be free from tubercle bacilli, but it contained the Friedländer bacillus in abundance. The patient finally died of heart failure during an acute exacerbation of her disease. At autopsy there were many areas with dilated small bronchi associated with an old vascular sclerosis. Around these lesions there were areas of splenization, pulmonary sclerosis or bronchopneumonic nodules. Although the Friedländer bacillus was rarely found in the sections, it is possible that, since the microörganism was present in the sputum for a long time, it alone was responsible for the bronchopulmonary lesions. Besides causing acute lesions in the lung, the bacillus does produce chronic lesions, such as bronchiectasis with changes in the neighboring pulmonary parenchyma. The symptomatology and course resembles tuberculosis and the differential diagnosis can be made by examination of the sputum.—*Pneumopathie chronique à bacilles de Friedländer, Brulé, Huguenin and Gilbert-Dreyfus, Meeting Soc. Méd. d. Hôp., October 21, 1927, reported in Prog. Méd., November 5, 1927, no. 45, 1749.*—(*U. E. Z.*)

**Pulmonary Infection with Friedländer's Bacillus.**—Friedländer's pneumonia presents a characteristic roentgen-ray appearance. Four stages of the disease may be recognized roentgenologically: *1:* The stage of bronchopneumonia. *2:* The stage of pseudolobar pneumonia. *3:* The stage of multiple abscess and cavity-formation. *4:* The stage of fibrosis. Friedländer infection of the lungs must be differentiated from bronchopneumonia, pneumococcic lobar pneumonia, influenza, and tuberculosis. Certain cases of supposed chronic pulmonary tuberculosis in which tubercle bacilli have never been found in the sputum may be, in reality, chronic forms of Friedländer infection. The fibrosis may cause certain cases of bronchiectasis for which no other cause can be found.—*The Roentgen Ray Diagnosis of Pulmonary Infections with the Friedländer Bacillus, K. Kornblum, Am. J. Roentgenol. & Rad. Therapy, June, 1928, xix, 513.*—(*W. I. W.*)

**Fusospirillar Bronchopneumonia.**—The principal symptom complained of by a negress, 36 years of age, was profuse expectoration of putrid material. It was purulent and rich in fusospirillar microörganisms. Physical and radiological examination revealed no foci, and examination of the upper respiratory passages was negative. At autopsy there were numerous areas of

bronchopneumonia with gram-positive cocci. There were no fusiform bacilli nor spirilla. Another patient, with a nontuberculous basal bronchiectasis, had many spirilla and fusiform bacilli in the sputum. Cultures showed the presence of cocciform and granular bodies which were considered as variations of the fusospirillar forms. This explained the cocci found in the first case and serves as a valuable diagnositic point in many pulmonary lesions of unknown aetiology.—*Pneumopathie à expectoration fétide fusospirillaire, Léon-Kindberg and Cattan, Meeting Soc. Méd. d. Hôp., December 2, 1927, reported in Prog. Méd., December 17, 1927, no. 52, 2086.*—(*U. E. Z.*)

**Streptothrix Bronchopneumonia.**—A case of streptothrix bronchopneumonia is reported in which the symptoms were fever, cough and blood-spitting. The clinical course was acute, and associated with an almost continuous haemoptysis. Postmortem findings showed that the condition was both aggressive and progressive, and it was characterized by the production of mycotic abscesses, from which arose metastases. Streptothrix manifests itself in the brain, lung and peritoneal cavity, the symptoms depending on the location of the infection. The conditions from which streptothrix infection must be commonly differentiated are tuberculosis, pneumonia, meningitis, actinomycosis, gumma and glanders. The only reasonably certain method of differentiation is the isolation and culture of the streptothrix.—*Streptothrix Necrotic Bronchopneumonia, I. H. Page, Arch. Int. Med., January 15, 1928, xl, 127.*—(*W. I. W.*)

**Pleuropulmonary Suppuration.**—Our understanding of partial, localized, especially interlobar or encysted, pleurisy has progressed a great deal since the current clinical application of radiology. In many cases the genesis of interminable pleuropulmonary suppurations can be determined. Although pleural exudates ordinarily resorb spontaneously with relative speed, sometimes, despite punctures, the pleura becomes transformed and thickened, and deposits of fibrinous masses occur in the fluid. Such thickening may reach 6 to 8 mm., and form a rigid shell around the more or less atelectatic lung. If puncture is delayed until late the fluid may become so loculated that injection of air is necessary to free it. Moreover, all sorts of curious radiological images appear, especially those known as "swallows nests," produced by false fibrinous membranes which traverse the thickened pleural wall. It is not at all astonishing that these encysted pleurisies often rupture into bronchi, giving rise to cavities and later abscesses. Open pyopneumothorax developing in this way has not the grave significance of open pyopneumothorax of the large pleural cavity, because the encystment of the process checks its advance and the thickened fibrous pleura does not readily absorb toxins. Interlobar encysted pleurisies are difficult of detection in many instances. These may rupture and become the source of interminable suppuration. Such are often mistaken for tuberculous cavities or for pulmonary abscesses. The typical picture is of an oval fluid-containing space flattened anteroposteriorly. The right superior interlobe is that most often involved. Usually encysted pyopneumothoraces or interlobar abscesses drain through adjacent bronchopulmonary channels, but sometimes they set up pneumonic processes in the adjacent pulmonary tissues, causing thick homogeneous shadows. Eventually the suppuration may tunnel into and honeycomb the lung. Mediastinal pleurisies are doubtless much more frequent than generally believed. In children it is not rare to see a dark band duplicating the cardiac area. In some instances, as Chauffard has noted, curious square densities are formed, encroaching on the main pleural cavity. Sometimes these rupture. De-Winter has observed 10 patients, who showed in the mediastinal region the triangular shadow generally considered as indicative of posterior mediastinal pleurisy. Sometimes these shadows can only be discerned with the patient in an oblique position. Many of these were in debilitated children of the pretuberculous type. Most of these shadows occurred on the left side. It is recalled that posterior mediastinal pleurisy occurs in the retroesophageal culs-de-sacs, between the mediastinal and visceral pleural layers. The exudates are in reality extrapleural, between two layers of the triangular ligament, and this localization causes the superposition noted. In the adult these layers or leaflets are generally adherent, and the mediastinal lymph nodes are less often involved in disease than in children. The left triangular ligament is slightly larger than the right. *Differential Diagnosis:* Aortic shadows must be distinguished, as well as those due to abscess about the colon. The most important symptom is the excessive expectoration without serious constitutional disturbance. The physical signs are variable. *Treatment:* Artificial pneumothorax is one of the most promising measures but is dangerous, as the main pleural cavity may be contaminated by rupture of the abscess, with fatal results. When the pocket is easily accessible, punc-

ture and injection of gomenolated oil should be done. Eventually most of these cases will probably come into the domain of surgery, including phrenicectomy and thoracoplasty.—*Les suppurations pleuro-pulmonaires, L. DeWinter, Rev. Belge d. l. Tuberc., December, 1926, xvii, 235.*—(*A. P.*)

**Postural Treatment of Pulmonary Suppuration.**—The curative value of postural treatment for pulmonary suppurative conditions depends on its early institution. A prime requisite for gravitational relief is a nonobstructed outlet from the region of the abscess. A low-hanging head and at the same time a free play of the respiratory muscles give the most desirable position, called by the author the "jackknife position." In order to permit an easy assumption of this posture and a prolonged period of suspension with the head low, it was found that having the patient hanging on a band across the groins, the body flexed forward on the thighs, and the head at the most dependent position, approached the ideal, as thus the chest and abdominal muscles are free from pressure and an "inverted bronchial tree" is created, the ideal position for drainage. Of additional value and possible only in the jackknife position, is abdominodiaphragmatic pulmonary compression. After the patient has evacuated as much secretion as possible by coughing, and while he is still in the suspended position, the physician stands behind him and places his hands on the back of the patient's thighs near the popliteal region, and a nurse who stands in front of the patient takes hold of his shoulders. The patient's body is then brought up into a nearly horizontal position. He is then told to take a slow deep inspiration and to hold his breath; then the physician and attendent simultaneously push toward each other, bringing the patient's knees toward his chin; this is done in a firm quick manner. The muscles of the patient's abdomen become fixed, as does the diaphragm, and the forced flexion of the inflated chest on the thighs causes the diaphragm to press upward against the distended lungs, and whatever residual secretion remains in the lungs is readily expelled.—*Postural Treatment of Lung Suppuration, M. J. Mandelbaum, Arch. Int. Med., December 15, 1927, xl, 840.*—(*W. I. W.*)

**Lung Abscess.**—The aspiration theory of the aetiology of abscess, following operations on the upper air-passages has, until recently, been regarded as generally applicable. The majority of tonsil and adenoid operations are done in young children, on whom local anaesthesia is impossible. However, recent experimental work by Cutler and Schlueter seems to favor the embolism theory, and they point to the fact that attempts to produce aspiration abscesses have generally failed. *Pathology:* The best recent description is by Aschner, who studied specimens from Lilienthal's lobectomies. He classifies the lesions as follows: *1:* Bronchiectasis. *2:* Bronchiectatic abscess. *3:* Suppurative pneumonitis. *4:* Extrabronchial abscess. The groups overlap and the lesions may be combined. Kline and Berger, in 1925, emphasized the rôle of spirochaetal infection, and 10 of their 15 cases responded strikingly to arsphenamine. The origin of the pulmonary infection was shown to be often pyorrhoea or carious teeth. In 1921 Sicard and Forestier introduced lipiodol into surgery and its value in demonstrating pulmonary pathology was shown by Sergent and Cottenot in 1925, since when it has been largely employed to map out bronchiectatic cavities and lung abscesses. Some authors ascribe great therapeutic value to it, especially in suppurative bronchiectasis, but Hedblom, Binney and others have not found it of any permanent benefit. Recently Binney has used the transglottic method of injection, through a curved cannula, which is easiest for the patient and effective. *Operative Treatment:* In abscess the one or two-stage operation has been used, depending on the presence or absence of pleural adhesions, and until recently tube-drainage, which has now been abandoned in favor of gauze or rubber dams. In bronchiectasis which does not yield to medical methods surgery is certainly indicated. Simple tube-drainage of the bronchiectatic area is often of distinct value, and in bilateral disease is the only safe palliative measure. Lobectomy, by Lilienthal's, Graham's or Whittemore's methods, is a radical measure. A far safer and more generally applicable method is graded extrapleural thoracoplasty, described by Hedblom, which usually affords a considerable measure of relief through collapse of the diseased area and cicatrization of a varying number of cavities, especially when combined with phrenicotomy on the affected side. In only young and vigorous patients are the more radical procedures justified.—*Suppurative Diseases of the Lungs, H. Binney, New England J. M., May 24, 1928, cxcviii, 725.*—(*A. P.*)

**Lung Abscess.**—A metastatic abscess of the lung developed in a patient suffering from an abscess on the chest-wall. Culture showed the streptococcus. Spontaneous expulsion of the pus occurred on the thirty-fifth day, and a complete cure after two and

one-half months. Eight days following a severe attack of Ludwig's angina another patient developed a lung abscess. The abscess was very voluminous and contained streptococci. On the seventy-fifth day spontaneous expectoration occurred and this was rapidly followed by complete recovery. No special form of treatment was used. Sergent states that in some cases, even after an apparently complete evacuation of the abscess, foetid expectoration and gangrene occur. Paisseau believes that about 60 per cent of lung abscesses are benign.—*Deux cas d' abcès du poumon, Bernard, Dreyfus and Dubucquois, Meeting, Soc. Méd. d. Hôp., January 20, 1928, reported in Prog. Méd., January 28, 1928, no. 4, 159.*—(*U. E. Z.*)

**Amoebic Abscess of Lung.**—In a man, aged forty-five, with no history of dysentery, the physical signs and radiographic findings were similar to those found in an interlobar pleurisy. Expectoration was foetid. Exploratory puncture revealed amicrobic pus. The abscess almost completely filled the right hemithorax. The patient was given emetin and a complete cure followed. After eight months all physical signs and radiological findings had disappeared.—*Un cas d' abcès du poumon confondu avec une pleurésie interlobaire et guéri par l' émétine, Lemierre and Kourilsky, Meeting, Soc. d. Chirurgie, January 11, 1928, reported in Prog. Méd., January 21, 1928, no. 3, 116.*—(*U. E. Z.*)

**Pulmonary Abscess and Gangrene.**—Pulmonary abscess and pulmonary gangrene are separate entities, although usually considered and treated as one disease. As observed in the Mount Sinai Hospital, New York, the former occurred more frequently in children than in adults, and the majority of cases were of the aspiration type, with a correspondingly fair prognosis. The remainder of the cases were embolic in type, associated with abscesses elsewhere in the body, and usually with a staphylococcus septicaemia. Pulmonary gangrene is a much more severe disease, occurring more frequently in adults than in children. More cases of gangrene were observed than of pulmonary abscess. There is anatomical and experimental evidence that pulmonary gangrene is caused by a group of microörganisms aspirated from the oral cavity, notably spirochaetes, fusiform bacilli and vibrios. A careful examination of the sputum will usually differentiate between abscess and gangrene. In the former the sputum is yellowish, mucopurulent or purulent, and has no appreciable odor. When washed it shows the pyogenic microörganisms in cultures and in smears stained by the gram method. In pulmonary gangrene the sputum is foul and grayish-brown or green, and when washed it shows the characteristic spirochaetes, fusiform bacilli and vibrios in smears stained by strong carbol-fuchsin or by the Fontana method. It is important to differentiate between the two conditions, as pulmonary gangrene does not respond to the treatment for abscess, but is frequently cured by arsphenamine therapy.—*Pulmonary Abscess and Pulmonary Gangrene, B. S. Kline, J. Am. M. Ass., June 23, 1928, xc, 2008.*—(*G. L. L.*)

**Pulmonary Gangrene.**—A thoracopneumonotomy was done as an emergency operation, in order to drain successfully a gangrenous abscess of the lung in a female patient. On the day following the operation, neosalvarsan therapy was started, and the patient recovered. The sitting position is advised for all thoracotomies. Early operation is indicated in every case as soon as the diagnosis is made.—*Gangrène pulmonaire; abcès du poumon; Thoraco-pneumotomie; Néosalvarsan. Guérison. P. de la Villéon, Soc. d. Chirurgiens de Paris, November 16, 1927, reported in Prog. Méd., December 17 1927, no. 52, 2086.*—(*U. E. Z.*)

**Postcancerous Pulmonary Gangrene.**—In a patient complaining of dysphagia, oesophagoscopy was done with negative findings. Following this procedure, all symptoms referable to the oesophagus disappeared. Later the patient entered the hospital suffering from acute pleurisy, which masked the underlying pulmonary changes. At autopsy cancer of the oesophagus was found associated with gangrene of the lung. Another patient with a mediastinal neoplasm, probably sarcoma, showed signs of pronounced venous compression. Radiotherapy was instituted, but without improvement. By fluoroscopy the development of a mass was observed apparently extending from the tumor. Autopsy revealed massive gangrene of the right upper lobe.—*Deux cas de gangrène pulmonaire post-cancéreuse, Kindberg, Grandclaude and Cattan, Meeting Soc. Méd. d. Hôp., October 21, 1927, reported in Prog. Méd., November 5, 1927, no. 45, 1749.*—(*U. E. Z.*)

**X-Ray in Acute Empyema.**—For detecting this condition roentgenologically an anteroposterior and a posteroanterior projection are better than stereo projections because of the following facts: The nearer the fluid casting the shadow (for example, encapsulated empyema) is to the plate, the sharper will be its outline and the nearer does the shadow conform to the true size of the

body of fluid. The exposure should be taken in the upright position if this is at all possible because, when air is associated, this position gives a sharp fluid-line, which, with a clear unbounded area above it, frequently "differentiates an empyema in the presence of pneumothorax from a lung abscess with a shorter air line, smaller air bubble, and a thick encapsulation." A fluid-line with "air blackness" above it will differentiate empyema from pneumonia, pulmonary neoplasm, thickened pleura, bronchiectasis, etc. If no line is present, the upright position will indicate the location and amount of fluid; it will yield more information as to the costal angle, the obliteration of which is of extreme importance when there is a question of fluid or partial consolidation; it reveals the S-line of Ellis and displacement of the mediastinum. In the course of the treatment, which should be the "closed" or "air-tight method of drainage," the roentgenologist can help the surgeon a great deal by determining the level of the diaphragm on the affected side, demonstrating in postoperative plates the position of the drainage catheter, especially whether the tip is against the pleural surface so as to prevent drainage, showing whether air has been allowed to enter during insertion of the tube or during drainage, detecting encapsulation of pus during the course of treatment, lung abscess, pneumonia, contralateral pneumonia or empyema, pericardial effusion, bronchial fistula, etc. He can also furnish accurate records of the rate of healing, the amount of pleural thickening, or the formation of adhesions. If the pleura becomes so thickened as to cause great fogging of the plate, a 12 per cent solution of sodium bromide may be injected to outline the cavity. The roentgenologist may also determine when complete healing has occurred. He and the clinician can work in close coöperation and accomplish a great deal for the patient.—*Acute pleural empyema. A Clinical Radiological Study, R. B. Bettman and R. A. Arens, Radiology, 1928, x, 153.*—(*H. S. W.*)

**Polyneuritis Following Serofibrinous Pleurisy.**—In a patient suffering from serofibrinous pleurisy, symptoms of polyneuritis developed suddenly with the retrogression of the pleurisy. The presence of high fever and a lymphocytosis of the pleural fluid led to a diagnosis of tuberculous pleurisy in spite of the fact that guinea-pig inoculations were negative. The polyneuritis was also regarded as tuberculous.—*Polynévrite contemporaine de l'évolution d'une pléuresie séro-fibrineuse à lymphocytes, Crouzon, Justin, Bezançon, de Sèze, Meeting Soc. Méd. des Hôp., November 18, 1927, reported in Prog. Méd., December 3, 1927, no. 50, 1992.*—(*U. E. Z.*)

**Diagnosis of Haemorrhagic Pleural Exudates.**—A case of a haemorrhagic pleuritis was caused by the *Bacillus pyocyaneus*. The differential diagnosis from tuberculosis was simplified by the acute onset of the disease.—*Beitrag zur Differentialdiagnose der hämorrhagischen Pleuraexsudate, A. Mendershausen, Beitr. z. Klin. d. Tuberk., 1927, lxvi, 670.*—(*H. J. C.*)

**Bronchiectasis and Pulmonary Tuberculosis.**—Bronchial dilatation, in pulmonary tuberculosis, occurs mainly as cirrhotic bronchiectasis. A false bronchiectasis, designated as bronchiectatic cavity of phthisis, must be differentiated from this. Even though the bronchial wall is involved the destruction of the pulmonary tissue is most prominent. Widespread bronchiectasis, in association with exudative phthisis with multiple tuberculous cavities, is rare. In one case there was a healed tuberculous childhood infection and a postinfluenzal nonspecific bronchiectasis with active exudative cavernous pulmonary phthisis.—*Über das gleichzeitige Vorkommen von Bronchiektasie und tuberkulöser Lungenerkrankung, H. Kausch and R. Steinert, Beitr. z. Klin. d. Tuberk., 1927, lxvii, 498.*—(*H. J. C.*)

**Treatment of Bronchiectasis.**—The most frequent causes of bronchiectasis are as follows: Narrowing of the large bronchi due to scars, aspiration of foreign bodies, syphilis and tuberculosis; disease of the small bronchi and pulmonary parenchyma, such as chronic bronchitis, chronic indurative pneumonia, influenza, measles, and whooping-cough; diseases of the pleura causing tension on the parenchyma; atelectasis due to exudates. The treatment of all these causative diseases is most important as a prophylactic measure. When bronchiectasis is fully established treatment must aim at diminishing the sputum, at facilitating expectoration, and at preventing gangrenous processes. One of the most important procedures in reducing the amount of sputum is the limitation of fluid intake, according to Singer. With proper coöperation, 500 cc. of fluid will be found to suffice and to reduce the sputum greatly. Atropine and ethereal oils may be tried. In order to make expectoration easier, alkaline mineral water, inhalation with etheral oils, and with oxygen, and iodins by mouth may be prescribed. Postural drainage is most effective. At the first evidence of gangrene, neosalvarsan should be administered, or gomenol may be

instilled. If these measures are not successful within a brief period, surgical procedures, such as pneumothorax, phrenicectomy, thoracoplasty, pneumonotomy, and resection should be considered.—*Behandlung der Bronchiektasien, R. Strisower, Wien. klin. Wchnschr., April 5, 1928, xli, 495.—(M. P.)*

**Gangrenous Pleurisy Complicating Bronchiectasis.**—A patient with bronchiectasis developed a bronchopneumonia and during the fourth week of his illness he began having copious expectoration and later haemoptysis. A roentgenograph revealed an effusion at the right base. Thoracotomy was done and half a litre of foetid gangrenous pus was removed. Injections of antigangrene serum were given immediately and the patient recovered completely within nine weeks.—*Pleurésie gangréneuse chez un bronchectasique; empyème serothérapie; guérison rapide, M. H. Blanc, Meeting Soc. d. Chirurgiens de Paris, November 18, 1927, reported in Prog. Méd., December 10, 1927, no. 51, 2044.—(U. E. Z.)*

**Postoperative Massive Collapse.**—In an attempt to determine the aetiology of postoperative atelectasis, the histories of patients from two series of operative cases were studied and compared, the incidence in the first series being 0.6 per cent, and in the second series 0.2 per cent. Probably the process is inititated by a nervous reflex, largely vasomotor, resulting in narrowing of the lumen of peripheral bronchioles, swelling of mucous membranes, and resulting tenacious secretions. A probable secondary factor of importance in aetiology is quantitative changes in ventilation. It was noticed that in the second series of cases with a low incidence all patients were regularly put up on Gatch beds in a semi-Fowler position. A second factor was probably of greater importance, in that nearly all patients who had general anaesthesia were given hyperventilation by carbon-dioxide administration either during the anaesthesia or after the operation, or both, the mask being removed after the patient began to breathe deeply and more rapidly. This treatment was repeated several times. With all thoracic and abdominal operations there is a tendency to splint respiratory movements, and it has been noted that a preoperative diminished vital capacity is an important index of a tendency for the patient to develop some postoperative pulmonary complication. General anaesthesia further depresses respiration, and hyperventilation at this period greatly assists in keeping open the finer air-passages and diminishing the risk of atelectasis. Therapeutic hyperventilation after atelectasis has occurred has been observed to be of at least temporary benefit, resulting in increased luminescence of the affected lung field as seen in the fluoroscope, and with some corrections in the position of the heart. From this fact it is probable that the extent of pulmonary collapse is dependent in part on the respiratory volume. Bronchoscopic aspiration has also been recommended in addition to posture and hyperventilation. From these observations it would seem that all patients operated on under general anaesthesia should be given hyperventilation by a carbon-dioxide and oxygen mixture, should be kept in a semi-Fowler position, and should undertake periods of deep breathing at frequent intervals.—*Postoperative Massive Atelectasis: The Effect of Hyperventilation with Carbon Dioxide, W. J. Merle Scott and E. C. Cutler, J. Am. M. Ass., June 2, 1928, xc, 1759.—(G. L. L.)*

**Influenzal Fibrosis of Lungs.**—Apart from syphilis, tuberculosis and dust-inhalation, there are many chronic diseases in which the lungs show signs of permanent damage in the form of fibrosis, more or less bronchial dilatation, and possibly thickened pleura. The commonest of these is infection with the influenza bacillus. Cases of fibrosis of the lungs fall naturally into two groups, (1) those arising in childhood, and (2) those arising in adult life. This study is chiefly concerned with the latter. It occurs equally in the sexes; the greatest age incidence is between 30 and 55. These ages correspond with the fact that influenza in epidemic form has been particularly a disease of early adult life, and that we are now seeing the scars left by the epidemic of 1918 and subsequent years. The important point in the history of these cases is that, with few exceptions, patients could definitely trace back their trouble to some acute respiratory infection, and in at least 80 per cent this event occurred in adult life. In 25 cases there was a history of influenzal bronchopneumonia; in 12 during the epidemic of 1918–1919, and in the others during subsequent minor epidemics. In 17 others there was a history of severe influenza during epidemics. In all cases the influenza bacillus was grown from the sputum, and in the majority it was also found in cultures from the nasopharynx. The growth was abundant but never pure. The commonest associated organisms were streptococci and the *Micrococcus catarrhalis* in 94 and 70 per cent, respectively. On examination all cases showed some signs of fibrosis of the lungs, varying from slight signs at one or both bases to a widespread bronchiolectasis or a

massive fibrosis of one lobe or the whole of a lung. The physical signs naturally vary from case to case, but in an individual case they are remarkably persistent and, except during exacerbations, show little change. For descriptive purposes the cases are classified into five groups: *1:* Chronic bronchiolectasis. This is the most characteristic and severe form. The physical signs are very characteristic and even startling; abundant medium-sized moist râles heard over the whole or the greater part of both lungs of a patient who, while distinctly unwell, is yet able to walk about. *2:* Localized bronchitis. This is really a slighter form of the first variety. *3:* A combination of the above types with asthma. Nasopharyngeal infection is almost invariably present. *4:* Massive fibrosis is a less usual condition. *5:* Bronchiectasis of the textbook description is not often seen in these cases. All the patients complained of fatigue and general weariness; they were often regarded as neurasthenic. Nearly all showed some signs of effort syndrome, shortness of breath on slight exertion, palpitation, pain around the heart, and a quick pulse. The temperature was normal except during acute exacerbations. An appreciable haemoptysis occurred in seven patients, and in three this was at times alarming. Blood-streaked sputum was frequently seen. X-ray examinations sometimes show little, in spite of extensive physical signs, but more often they reveal more extensive lesions than the physical signs suggested. The most common finding is an increase of the root shadows and of the striae extending outward from the roots. The normal reticular structure of the lung may be exaggerated or may have a honeycombed appearance. Occasionally there is a general dimming from massive fibrosis or thickened pleura. The most important error in diagnosis is to mistake these cases for tuberculosis.—*Chronic Influenzal Fibrosis of the Lungs, L. H. Wynne, Lancet, November 5, 1927, ccxiii, 964.—(B. T. McM.)*

**Miliary Nodular Sclerosis of Lungs.**—The macroscopic appearance of the lesions in a patient suffering from nodular pulmonary sclerosis resembled a generalized fibrotic miliary tuberculosis. The histological picture was that of progressive chronic fibrotic bronchoalveolitis, which would have been diagnosed as tuberculous, except for the absence of giant cells and areas of caseation. It was thought to be due to a microbic infection of low virulence, because the small blood-vessels showed the presence of an intensely diffuse microbic invasion. The roentgenograph showed shadows of a diffused granular appearance. Some observers, in reading the plates, classed it as a form of pulmonary granulomatosis and others designated the lesions as being types of fibrotic tuberculosis. Similar shadows have been seen in the miliary types of nodular pulmonary sclerosis which cannot be definitely called tuberculous.—*Sclérose nodulaire du poumon à type miliaire. Images radiologiques, Macaigne and Nicaud, Meeting Soc. Méd. d. Hôp., November 18, 1927, reported in Prog. Méd., December 3, 1927, no. 50, 1991.—(U. E. Z.)*

**Pulmonary Anthracosis.**—Classical pulmonary anthracosis, except in miners, is pure fiction and should be replaced by the term *siderosis.* Studies were made on black and uncolored fragments of lung-tissue obtained from the same lung in patients dying of old age, and on light and dark mucopurulent sputum obtained from nontuberculous patients. The iron-content of the darker tissue was found to be at least ten times greater than that of the lighter tissues. The so called dust-cell must not be considered as a protective phagocyte but as a cell in which iron is deposited. In tuberculous and nontuberculous guinea pigs, the former rich and the latter poor in dust-cells, the iron-content was higher in the first group. It seems, therefore, that tuberculosis may give rise to pigmentation and the condition should be called pigmenting tuberculosis and not anthracotic tuberculosis.—*Recherches sur l'anthracose pulmonaire, Jousset, Meeting, Acad. d. Sciences, October 10, 1927, reported in Prog. Méd., November 5, 1927, no. 45, 1749.—(U. E. Z.)*

**Experimental Anthracosis and Pulmonary Tuberculosis.**—A small series of experiments on rabbits is reported, in which a suspension of coal-dust, prepared in a special but not specified way, was injected intravenously. The one control animal died after intravenous infection with human tubercle bacilli of a generalized caseous tuberculosis. The animal treated with coal-dust showed only small and well encapsulated foci. The action of the coal dust is believed to be a stimulation of reticulo-endothelial cells and an increased phagocytosis.—*Anthrakose und Lungentuberkulose, T. Wedekind, Klin. Wchnschr., May 6, 1928, vii, 890.—(M. P.)*

**Silicosis.**—Silica produces a reaction leading to a characteristic fibrosis. Particularly interesting works have been published by British industrial hygienists. Both the South African mines and industrial centres, such as Sheffield, England, have furnished a

vast field for observation. Particularly noteworthy are the studies of Collis and the report on the stone-polishing trades by Macklin and Middleton. In Belgium it is particularly the stone-polishing trades that have been studied. Middleton's classification of the clinical manifestations is as follows: *1:* Bronchial catarrh, involving the larger bronchi, bilateral and symmetrical. There are sibilant and sonorous rhonchi and large mucous râles, both inspiratory and expiratory. The respiratory murmur is vesicular. This affection is seen in workers exposed to nonsiliceous dusts. *2:* Bronchitis, a somewhat later stage, associated with permanent alterations of the bronchial mucosa and leading to fibrosis. *3:* Pulmonary catarrh, characteristic of the stone-polishers, often bilateral, and usually basal. Dyspnoea is a most common symptom. Cough is habitual, either nocturnal or matutinal, and is painful. The patients have a sense of tension in the chest. Examination shows diminished pulmonary function over the affected areas. The thoracic perimetry is diminished, also inspiration and resonance. Respiration is especially obscured at the base. After coughing are heard various adventitious sounds, or fine, medium and sibilant râles, etc., may disappear after coughing. There appears to exist a fibrosis, probably consequent upon lymphatic and vascular obstruction, and of special perivascular distribution. Another type of invasion is unilateral and of acute character. *4:* Fibrosis: This may be primary, resulting from inhalation of minute particles of emery dust, or secondary to chronic bronchitis. Auscultation does not reveal as much as roentgenographs, a more or less pronounced harshness of respiration being usually all that is heard, and sometimes accompanied by coarse bronchial râles. Denet-Kravitz has seen in five years but one case terminate in tuberculosis. Many cases, however, may simulate tuberculosis, either of the phthisical or miliary variety. The typical pathological lesion is a nodular perivascular endoperilymphangitis. Practically every case of silicosis shows in the X-ray picture a network of clear lines. Eighteen cases with illustrative roentgenographs are reported.—*À propos des Pneumoconioses, Denet-Kravitz, Rev. Belge d. l. Tuberc., March-May, 1926, xvii, 73.*—(*A. P.*)

**Pulmonary Asbestosis.**—A case of pulmonary asbestosis is reported. The deceased, a woman aged 33, commenced work at the age of 13 years in an asbestos factory. From an early age, soon after commencing work, she suffered from a cough which did not interfere with her general health until 1917. From this time until 5 years later her attendances at work were intermittent owing to ill health. She complained of cough, dyspnoea, expectoration, and lassitude. She finally ceased work in July, 1922. The physical signs in her chest were those of fibrosis of the right lung. In July, 1922, signs of cavitation were noticed, the sputum became more profuse, there were sweats and irregular temperature, and the patient died March 14, 1924. Microscopic sections of the lung showed an enormous amount of fine granular pigment in the peribronchial fibrous tissue, walls of the alveoli, and phagocytes scattered through the sections. The particles of this dust are similar in size and shape to the black granules seen in the asbestos fibre. Illustrations are given of large solid angular particles situated in the areas of fibrosis and in caseating areas. Numerous sections made from both lungs showed that the pathological changes in the two lungs differed only in degree. They may be summarized as follows: *1:* Well-marked diffuse interstitial pneumonia, with chronic bronchitis and some emphysema. *2:* Well-marked anthracosis. *3:* An extensive tuberculous condition. *4:* Foreign bodies in the alveoli, bronchi, and bronchioles, and also in the interstitial fibrotic areas. The interstitial fibrosis was progressive. Tubercle bacilli were not detected, but the histology was characteristic. The relative part played by the asbestos and the tuberculous infection in this case, in relation to the fibrotic changes is difficult to determine, but it is a reasonable assumption that tuberculosis was a superadded infection. Pulmonary asbestosis resembles silicosis in the marked shortness of breath on slight exertion, deficient respiratory capacity, physical debility, and the absence of tubercle bacilli in the sputum of not too far advanced cases. The clinical picture of pulmonary asbestosis differs slightly from that presented by ordinary pulmonary tuberculosis, in so far as there is a pronounced deadening of the skin varying from mild bronzing to slight blueness, a degree of shortness of breath in excess of the physical signs, a greater amount of general disability, little expectoration, and comparative absence of night-sweats.—*Pulmonary Asbestosis, W. E. Cooke, S. McDonald and T. Oliver, Brit. Med. J., December 3, 1927, no. 3491, 1024.*—(*W. I. W.*)

**Pulmonary Asbestosis.**—Specimens of lungs from 4 autopsies of asbestos miners were studied. Sections showed generalized fibrous thickening of the pleura, trabeculae and alveolar walls of moderate degree.

Embedded in the fibrous tissues, lying free in the alveoli and contained in the phagocytic cells, there were numerous golden-yellow segmented bodies. These golden-yellow bodies showed a variety of shapes, but the most common forms had rounded or club-shaped ends and a segmented body tapering to a finely pointed tail.—*Pulmonary Asbestosis in South Africa, F. W. Simson, Brit. M. J., May 26, 1928, no. 3516, 885.—(W. I. W.)*

**Pulmonary Asbestosis.**—Asbestos is quarried out of rock that contains a high percentage of silica which may do harm when inhaled. But in the manufacture of asbestos into goods, carding, spinning and "beating" must be done. These processes are very dusty. Two employees who had worked, one for thirty and one for eighteen years in this dust, presented for examination because of increasing physical debility, shortness of breath, cough and loss of weight. Limited pulmonary expansion at the base, signs of widespread fibrosis, and in one a basal cavity were made out. No tubercle bacilli were detectable in the sputum. Pulmonary asbestosis differs from tuberculosis in the following ways: There are darkening of the skin, dyspnoea in excess of the physical signs, great disability, little expectoration and comparative absence of night sweats.—*Pulmonary Asbestosis in Its Clinical Aspects, T. Oliver, J. Industr. Hyg., November, 1927, ix, 483.—(H. S. W.)*

**Foreign Bodies in Air-Passages.**—Non-opaque foreign bodies in the air-passages produce much more marked symptoms than do metallic bodies. Almost any organic foreign body may set up such symptoms, but the peanut is one most commonly encountered and one that leads to stormiest symptoms, which usually consist of trauma, oedema, congestion, spasm, exudation and toxaemia. These features are responsible for the signs and roentgenological findings, so that removal of the offending body does not necessarily produce an immediate clearing up of symptoms or clinical and X-ray signs. Eight of 26 cases required intubation and two of them tracheotomy after the foreign body had been removed, while neither of these procedures had to be resorted to in cases of metallic foreign bodies. In all these cases roentgenographs were taken within 48 hours of the accident. The common roentgenological signs of such a condition are best revealed with the patient in complete expiration, and in these cases were (1) unilateral emphysema on the affected side, (2) flattening and limited mobility of the diaphragm on the affected side, and (3) displacement of the heart and mediastinum toward the unaffected side. No evidence of atelectasis, "drowned lung" or abscess was found because the cases were seen early and obstruction was not complete. Twenty-six of the cases were examined bronchoscopically immediately after taking of the film for diagnosis, and in 22 of these roentgenological diagnosis of foreign body in the bronchus was made. In all but two of these the foreign body was in either the bronchus or the trachea. In two cases no foreign body was found, and in the remaining four foreign body was found in the trachea although the roentgenological examination was negative. Few diseases in children will cast a shadow suggesting a nonopaque foreign body. In adults such appearances may be produced in the roentgenological plate by granulation-tissue, aneurysm, and bronchial or mediastinal tumors.—*Non-Opaque Foreign Bodies in the Air Passages, R. T. Allison and K. Phelps, Radiology, 1928, x, 157.—(H. S. W.)*

**Pulmonary Mycosis.**—Tropical bronchopulmonary mycoses are prevalent in Siam, and Mendelson has obtained pure cultures of *Aspergillus* from cases at autopsy. Small pseudotubercles or mycotic tumors stand out prominently. Greeley has described 14 cases with *Penicilium glaucum* in the sputum. They exhibited most of the clinical manifestations of tuberculosis. Castellani has described various animal and vegetable parasites. The chief symptoms in man are purulent bronchitis, haemoptysis and fever. The disease is often fatal, and mycotic nodules may be found postmortem in the lungs and other viscera. The pathological lesions may be limited to the bronchi or extend into the surrounding alveolar-tissue and the sputum may contain spores and hyphae. At autopsy there is a central necrotic mass surrounded by a darkly colored edge. The necrotic area shows nuclear fragmentation, and is surrounded by a zone of broken down leucocytes. Inodorous masses of gangrene result. The infection may coexist with tuberculosis. The case reported is that of a negro boy of 15, who had a mycotic infection of the right lung with lesions in the neighborhood of the bronchi, pleura and pulmonary vessels. Associated with this was an extensive tuberculous peritonitis and right fibrinous pleurisy. Death occurred from intraabdominal haemorrhage following secondary invasion of a sinus tract. Microphotographs are shown.—*A Case of Pulmonary Mycosis, W. R. Stokes and S. McCleary, Boston M. & S. J., January 19, 1928, cxcvii, 1350.—(A. P.)*

**Similarity of Pulmonary Blastomycosis to Tuberculosis.**—The rarity of fungus infections in man, particularly if the microörganisms are obtained, is sufficient to warrant the reporting of two cases of pulmonary blastomycosis. In addition, as is pointed out in this report, the similarity of the morbid anatomy and histopathology of the infections due to fungi and those due to tubercle bacilli, is worthy of note. In comparing infections due to fungi and tubercle bacilli, it is reasonable to assume that the different phases in one type of infection should be compared with corresponding phases in the other. In the two cases here reported all phases of the disease are demonstrable. One case represents the phase in which death resulted in a short time, whereas the second case represents the phase of chronic disease, without clinical manifestation of the true aetiology. Just as is often seen in tuberculosis, intermediary lesions exist and interlock in many cases and thus give a complete picture. The case reports and plates with their descriptions are submitted. Briefly, physical examination of the first case showed granulating lesions on the chest and temple, and a knee lesion diagnosed as tuberculous arthritis. Biopsies from the skin and joint lesions showed the histopathology of blastomycetic infection. Anatomical examination revealed generalized blastomycosis involving the lungs, kidneys, lumbar vertebrae, numerous joints, bones, and skin; bilateral iliopsoas abscess, acute pleuritis, congestion of the liver and spleen, dilated right heart, and marked emaciation. Microscopic studies of the heart, lungs and kidneys aside from the presence of the special microörganism, showed lesions similar to those caused by tubercle bacilli. Areas of caseation are demonstrable in some sections, giant cells in some (these are rare), and typical mononuclear tubercles in other sections. Yeast-like bodies are easily found in all the lesions. The anatomical diagnosis in the second case was that of old tuberculosis involving both lungs, spleen and kidneys. Microscopic examination of sections taken from these organs confirms the anatomical diagnosis except in regard to aetiology. All sections showed fungi to be present, but no tubercle bacilli could be found even after prolonged search. Typical tubercles and areas of caseation are found. Many investigators are quoted as having found such a striking similarity of the lesions due to fungus infections and those caused by tubercle bacilli that an aetiological diagnosis is considered impossible from the histopathological picture, and possible only after fungi or tubercle bacilli have been demonstrated in the lesion. It is suggested that X-ray shadows in these two cases, had X-rays been taken, would have been indistinguishable from those seen in cases of pulmonary tuberculosis. The conclusions are as follows: *1:* Two cases of primary pulmonary blastomycosis are reported. *2:* The identity of the gross and microscopic pathology in fungus and tuberculous infections is emphasized. *3:* The necessity of bearing in mind the possibility of fungus infection as well as tuberculosis in the clinical and X-ray study of pulmonary lesions is suggested. *4:* Before a positive diagnosis of tuberculosis can be established, the presence of the tubercle bacillus or the absence of a fungus should be demonstrated. The presence of the parasite and not the pathological lesion will establish the type of infection.—*Pulmonary Blastomycosis: Its Similarity to Tuberculosis, E. M. Medlar, Am. J. Path., July, 1927, iii, 305.*—(*H. McL. R.*)

**Reticulum in Pulmonary Blastomycosis.**—The reticulum in two cases of blastomycosis, one acute case, the other chronic, is described, and its similarity to the reticulum seen in tuberculous bronchopneumonia is pointed out. Blastomycosis is described as, "essentially a bronchopneumonia and more a bronchitis than a pneumonia." In the two cases presented bronchopneumonia was the outstanding lesion. Three types of bronchopneumonia are associated with tuberculosis lesions and each type presents a characteristic picture when stained for reticulum. The types are described in some detail. The acute and chronic cases are taken up separately. It is noteworthy that sections of the lung of acute blastomycosis present similar characteristics to sections of tuberculous bronchopneumonia and described under type two, aside from the presence of the special organisms of blastomycosis. The characteristics found in both cases are as follows: Thickening of the walls of the alveoli; an increase in the amount of reticulum in their walls and no reticulum within the alveoli. A more detailed description of the sections of the blastomycosis is given with a short discussion of the staining characteristics. The best demonstration of the organism is obtainable by the use of the Bielschowsky silver method. It seems that there is a difference of opinion concerning the propagation of the organism. Some think it is propagated by podding, while others believe it to be propagated by spores. The reticulum plays a similar part in the reparative process of blastomycosis as it does in the same process in miliary tuberculosis. In both cases in which caseation has not taken place there is a progressive development of reticulum which eventually

is converted into collagenous tissue. In cases in which caseation has taken place, unless the area of caseation be too large, the necrotic material is gradually absorbed and the reticulum eventually fills in the space thus created. In the chronic case of blastomycosis scattered mononuclear tubercles containing the organism were present, especially in the pleura; numerous giant cells were present; there was no acute inflammatory cellular exudate and the lesions resembled the reparative process in miliary tuberculosis. The remainder of the article is concerned with a description of the four plates submitted, showing the organisms of blastomycosis, areas of caseation being absorbed and replaced by reticulum and collagenous material. The author concludes as follows: This study of the reticulum shows that its growth and transformation into collagenous tissue differ in no way in the tubercle of blastomycosis from that in the tubercle of tuberculosis. If the presence of the special organism be eliminated from the picture, the lesion is the same in both infections. This leads to the conclusion that, though the organisms differ, the lesion they produce cannot be differentiated.—*The Reticulum of the Lung, W. S. Miller, Am. J. Path., July, 1927, iii, 315.*—(*H. McL. R.*)

**Pulmonary Actinomycosis.**—A case is reported of a colored girl, aged 2½ years, with a history of cough of three months' duration, foetid breath, and moderate fever. The roentgenograph revealed dense consolidation of the upper two-thirds of the right lung. Râles were not numerous. The tuberculin test was negative, and otherwise the laboratory routine revealed a moderate leucocytosis. Three weeks after admission the roentgenograph suggested small cavities in the right apex. Soon after, with no further change in clinical condition, an abscess appeared in the right pectoral region, yielding greenish-yellow thick pus, a culture of which was sterile and guinea-pig inoculation negative for tuberculosis. The abscess increased in size, consolidation of the whole lung took place, and later roentgenographs showed erosion of the second, third and fourth ribs. Surgical consultants agreed on a diagnosis of cold abscess secondary to pulmonary tuberculosis and tuberculous periostitis. The wound of incision failed to heal. After two months the temperature, pulse and respiration were normal, but the abscess and discharging sinus persisted. A month later the patient died of severe haemoptysis. Autopsy proved the condition to be actinomycosis of the lung with secondary gangrene. In this case the clinical course simulated that of tuberculosis and repeated examinations failed to reveal the specific fungus.—*Pulmonary Actinomycosis: Report of a Case in a Two and One-Half Year Old Child, L. J. Halpern and A. Levinson, J. Am. M. Ass., July 7, 1928, xci, 13.*—(*G. L. L.*)

**Syphilis of Pulmonary Artery.**—The literature on this subject is reviewed, and a case of proved primary syphilis of the pulmonary artery is reported. In its clinical and pathologico-anatomical significance syphilis of the large vessels is mainly a question of aortic syphilis. In comparison with the relative frequency of aortic syphilis, the localization of syphilis in the pulmonary artery is a rarity. Only three such cases which give pictures comparable to aortic syphilis, macroscopically and microscopically, have been reported. Of the 29 cases of pulmonary-artery syphilis reported, the author considers only twelve as proved macroscopically and microscopically to be primary syphilis of this vessel. Two cases reported in the literature are considered, in this article, as secondary extensions of syphilitic processes in adjacent areas. Fifteen of the 29 cases are put in a third group in which the diagnosis was considered uncertain because of unsatisfactory macroscopic or microscopic descriptions, or in which the descriptions might as well have applied to atheromatous or atherosclerotic changes. Each of the 29 cases is summarized. Also the history and a description in detail of the anatomical and microscopic findings and diagnosis are given of the case here reported. The present report also covers all the literature published on the subject up until 1927. *Summary: 1:* Syphilis of the pulmonary artery, as shown by those cases in which there is no doubt about the aetiology, attacks almost exclusively the main trunk, and only occasionally extends to one of the main branches. It is a rare disease, not only when considered by itself, but also as compared to the relative frequency of aortic syphilis. Only 12 absolutely certain cases, inclusive of the one reported here, could be gathered from the international literature studied *2:* Besides those cases which may be designated as primary syphilis of the pulmonary artery, there is a form which may be called secondary, and which is characterized by the immediate extension of gummatous processes from the mediastinum into the wall of the pulmonary artery. *3:* On microscopic examination, the presence of gummata in the trunk of the pulmonary artery exceeds that in the corresponding form of the productive syphilitic aortitic type in the ratio of 9:3. In syphilitic disease of the aorta the proportion is reversed, as far as could be judged

from the material so far studied. *4:* The forms of syphilis of the pulmonary artery corresponding to the productive aortitis in the material studied are combined with the formation of aneurysms. *5:* Gummata of the pulmonary artery may be solitary or multiple. Sometimes they are in the form of a totally diffuse, severe gummatous inflammatory process, as in the case reported here, and may be combined with scar-like changes of the arterial intima, which may result in a closure or thrombosis of one main branch of the pulmonary artery. *6:* The formation of gummata in the pulmonary artery, especially in the case of solitary gummata, may cause no change in the lumen. In other cases stenosis results. Gummata of the pulmonary artery are frequently accompanied by aortic syphilis, namely, syphilitic aneurysm of the aorta. *7:* Frequently the heart participates in the formation of gummata in syphilis of the pulmonary artery. Accompanying syphilitic changes in the other organs, such as gummata or scars in the liver, are not infrequent. However, the aorta, the heart and the other organs may be found free from the syphilitic processes in the most severe type of syphilis of the pulmonary artery. *8:* The necrotic gummatous formations of the severest type may remain entirely localized to the intima of the pulmonary artery. This is contrary to the observations so far described in the pathological anatomy of gummatous aortitis, in that there is a total syphilitic mesaortitis in the latter.—*Pathologic Anatomy of Syphilis of the Pulmonary Artery, S. M. Peck, Arch. Path., September, 1927, iv, 365.*—(*H. McL. R.*)

**Pulmonary Syphilis Complicating Phthisis.**—Bilateral cavernous pulmonary phthisis, with cavity, in the upper lobes of an adult was later complicated by pulmonary syphilis. Diagnosis was made roentgenologically as well as at autopsy.—*Beitrag zu den erworbenen spätsyphilitischen Lungenerscheinungen, vor allem im Röntgenbilde erwachsener Phthisiker, H. Lossen. Beitr. z. Klin. d. Tuberk., 1927, lxvi, 761.*—(*H. J. C.*)

**Cancer of Lung.**—In a man aged fifty-one, syphilitic and tuberculous, autopsy showed the presence of numerous cancerous nodules in both lungs. There were, also, many tuberculous caseating masses. Whether the pulmonary cancer was secondary to carcinoma of the digestive tract or primarily of bronchial origin remains unsettled.—*Cancer du poumon, Babonneix, Huguenin and Wildiez, Meeting, Soc. Méd. d. Hôp., February 3, 1928, reported in Prog. Méd., February 11, 1928, no. 6, 244.*—(*U. E. Z.*)

**Cancer of Lung.**—An aged female presented the clinical picture of chronic fibroid tuberculosis. A mass appeared at the level of the spine of the scapula, and destruction of bone was found in the superior maxilla. A diagnosis of epithelioma was made, which was confirmed at autopsy. Metastases were found in the liver, spleen and cranial bones. This case illustrates again the frequency of bone metastases in primary cancer of the lung. The character of the tumor and the intense fibrotic reaction explain the clinical and anatomical course of a slowly progressing pseudotuberculous fibrosis.—*Sur un cas de généralisation néoplasique à point de départ vraisemblablement pulmonaire, Kindberg and Garçin, Meeting Soc. Méd. d. Hôp., October 28, 1927, reported in Prog. Méd., November 5, 1927, no. 45, 1750.*—(*U. E. Z.*)

**Primary Intrathoracic Neoplasms.**—It is only comparatively recently that the diagnosis of primary intrathoracic neoplasm is fairly commonly made prior to the patient's reaching the autopsy table. The previous rarity of the condition is not to be ascribed only to diagnostic failures, for the many autopsies failed to show the presence of primary intrathoracic neoplasms. In five thousand necropsies done at Bellevue prior to 1917, primary carcinoma of the lungs was seen only three times, whereas in six thousand necropsies done between July, 1919 and 1925 at the same institution 29 such cases were found. Other records and the possible causes for the increase of this condition are given. The factors mentioned as possibly responsible for the increase are as follows: Increasing length of life; modern industrial conditions; influenza. The present study is based upon 11 cases of primary intrathoracic neoplasms. The right lung was involved five times, the left three times, and the mediastinum three times. The average age of the patients was forty-three years, and there were eight males and three females. Pathological findings showed that carcinoma of the lung may develop from the epithelial cells of the bronchi, the alveoli, or the bronchial mucous glands. The tumor mass may by proliferation infiltrate the lung parenchyma, or by reason of growth it may cause stenosis of a bronchus or bronchi, producing atelectasis and possibly later suppuration, necrosis and haemorrhage due to secondary infection. For these reasons it can be easily understood that patients with carcinoma of the lung may give very different histories, and have complicating and variable symptoms and physical and X-ray findings. The disease is insidious, and it is only late that emaciation, asthenia and profound intoxication are manifested. The first symp-

toms are often slight unproductive cough, dyspnoea and occasional chest pain. The presence also of other pathological conditions, particularly chronic tuberculosis, should be kept in mind. Two of the patients reported upon here had fibroid phthisis prior to the development of carcinoma. The most common symptoms are pain, cough, expectoration, dyspnoea, haemoptysis and emaciation. As has been suggested the physical findings may vary tremendously, depending upon the location and size of the tumor mass, whether or not it exerts sufficient pressure upon a bronchus or bronchi to cause stenosis with subsequent atelectasis, secondary infection, suppuration, cavity-formation, etc. In considering the possible and likely variable and confusing findings one should remember the three forms in which pulmonary neoplasms may be manifested. They are as follows: *1:* The pulmonary form which is characterized by and presents evidence of infiltration of the lung parenchyma. *2:* The pleural form, with thickened dry pleura, or with fluid. *3:* Either of the two above forms with cavity or abscess-formation and foul-smelling expectoration. Four cases are submitted, illustrating the points already mentioned, with a complete history, physical and X-ray findings, symptoms, and laboratory and pathological findings. One case was that of pulmonary neoplasm without secondary infection and abscess-formation; another case was that of abscess-formation secondary to pulmonary malignant tumor; the other two were malignant tumor of the pleura and the mediastinum. By way of review it may be emphasized that in the diagnosis of intrathoracic neoplasm one must make use of the modern diagnostic methods and should not depend upon physical findings alone. Bronchoscopy, examination of the sputum and pleural fluid for neoplastic cells, and, probably most important, the use of the *X*-ray, should never be overlooked. After the induction of artificial pneumothorax and subsequent aspiration of fluid when present, the tumor mass may often be demonstrated more plainly on the X-ray film. Unless the diagnosis is made early the treatment is most always valueless. The two therapeutic methods that seem to offer the best results, granted the condition is diagnosed fairly early, are deep roentgen-ray and radical surgery. No favorable results were obtained in any of the cases here reported. The disease was far advanced when the diagnosis was made.—*Primary Intrathoracic Neoplasms: An Analysis of Eleven Cases, A. I. Ruberstone and M. Schwartz, Med. J. & Rec., December 21, 1927, cxxvi, 719.*—(*H. McL. R.*)

**Primary Cancer of Lung.**—A group of cases of parenchymal pulmonary carcinoma at a relatively early stage of the disease were studied, in order to establish the characteristic roentgenological picture. Parenchymal carcinoma is usually adenocarcinoma, and tends to run a rapid, although, at first, a symptomless course. Three roentgenological types are described. The nodular type is the most common, and consists of an irregularly rounded infiltrating nodule lying completely in the pulmonary fields, usually not involving the periphery. The lobar type is of homogeneous density; it occupies an anatomic lobe, and has an infiltrating edge. In the infiltrating type there is increased density of the bronchial tree radiating from the hilum. The differential diagnosis includes a consideration of metastatic tumor, various inflammatory processes, tuberculosis, mediastinal tumor, venous congestion, and other conditions.—*The Roentgenologic Manifestations of Primary Carcinoma of the Lung, B. R. Kirklin and R. Paterson, Am. J. Roentgenol. & Rad. Ther., January, 1928, xix, 20.*—(*W. I. W.*)

**Primary Cancer of the Lung.**—Pathological examination of the growths showed about equal numbers of epithelioma and adenocarcinoma, most of which were highly malignant. The major roentgenological characteristics of bronchial tumors were two-fold: density in the hilum, and atelectatic or bronchiectatic appearance. A unilateral density of the hilum occupying the whole hilum, usually perceptibly separate from the mediastinum and ramifying into the parenchyma, especially if associated with apparent bronchiectasis or with atelectasis of the lung, must be carefully considered in the light of a clinical history before being dismissed as other than a malignant lesion. The differential diagnosis includes a consideration of chronic bronchitis or pneumonokoniosis and mediastinal lesions, such as aneurysm, carcinoma of the oesophagus, benign tumors, gumma of the mediastinum, mediastinal abscess, and chondroma or sarcoma of the spine.—*The Roentgenologic Manifestations of Primary Carcinoma of the Lung, B. R. Kirklin and R. Paterson, Am. J. Roentgenol. & Rad. Ther., February, 1928, xix, 126.*—(*W. I. W.*)

**Primary Cancer of Lung.**—A patient, aged 28 years, had frequent small haemoptyses over a period of one year. Dyspnoea was slight at first, but gradually became worse, and towards the end almost asphyxiating. In addition, he had constant fever and pains in the chest. On physical examination there was dulness over the lower two-

thirds of the left lung, harsh breath-sounds and diffuse moist râles. Roentgenographs showed the presence of infiltrations in the left base and in the infraclavicular region on the same side. A clinical diagnosis of mitral stenosis and pulmonary tuberculosis was made. Neither of these could be decisively corroborated. The diagnosis of malignant tumor was a plausible one, but could not be confirmed by sputum examination. At autopsy cancerous processes were found but whether or not they were of alveolar or bronchial origin could not be determined.—*Cancer pulmonaire primitif à forme hémorragique, Merklen and Wolf, Meeting Soc. Méd. d. Hôp., December 2, 1927, reported in Prog. Méd., December 17, 1927, no. 52, 2085.*—(*U. E. Z.*)

**Primary Cancer of Lung with Unusual Metastasis.**—The case reported was that of a white female, aged 53 years, who died suddenly. There was no suspicion of malignant disease of the lung antemortem. The clinical picture was that of cardiorenal disease. A detailed autopsy report is given, including also microscopic studies of the lung and heart. The lesions of the lung were described on gross examination at autopsy as, and mistaken for, an area of tuberculosis. The pericardial sac was greatly distended, being filled with serosanguineous fluid. The heart was small and revealed, on gross examination, a few small varices over the anterior surface of the left ventricle. The myocardium was soft and pallid, and marked with irregular fibrous patches. Microscopic sections of the diseased portions of the lung revealed a tumor of cylindrical and cuboidal cells growing in alveolar arrangement. Sections of the peribronchial lymph nodes showed tumor masses with papillary projections lined chiefly by cylindrical cells. Sections of the myocardium showed tumor cells similar to those described in the lung sections, and arranged in large and small alveoli, in some places with papillary projections, in others with small masses of cells and smaller acini within the alveoli. There were no metastases in any other part of the body. Presumably the varices were the sites of vascular invasion, and it was considered probable that the rupture of one of these varices, with consequent haemopericardium, resulted in the sudden death of the patient.—*Primary Carcinoma of the Lung, K. V. Kitzmiller, Arch. Path. & Lab. Med., September, 1927, iv, 356.*—(*H. McL. R.*)

**Bony Changes in Bronchogenic Cancer.**—A review of the literature indicates that metastases in bones with bronchogenic carcinoma are common. The changes resulting are either a destruction of bone, such as occurs with carcinoma metastases generally, or proliferations of bony tissue along the periosteum, an osteoperiostitis. There is some doubt whether the periosteal changes are due altogether to actual metastases into the periosteum or are bony alterations secondary to pulmonary disorders of the Marie type. A case is reported of a man, aged 38, complaining of pain and immobility of the right elbow, of about a year's duration. The elbow was swollen and indurated, with some swelling of the hand and fingers. The roentgen-ray disclosed an apparent osteomyelitis, and an operation was done, revealing sclerotic bony changes suggesting syphilis, while microscopically there was evidence of chronic inflammation, with fibrous tissue replacing fat in the marrow-spaces. Wassermann tests were negative. Two months later the proximal ends of the radius and ulna were removed, both ends being eroded, and this was followed by considerable improvement, but two months still later the arm was greatly swollen and painful again, and soon became blue and oedematous, with palpable axillary lymph nodes. An amputation was done, and a microscopic diagnosis of metastatic carcinoma made. The primary tumor could not be demonstrated. A few weeks later the patient complained of pain in various joints, and the knees, ankles and hands were hypertrophied. Within a few weeks a hypostatic pneumonia developed and the patient died. At postmortem a small warty carcinoma of the left lower-lobe bronchus was found, with the pleura and lymph nodes studded with small metastases. The tumor had not been revealed by the chest roentgenographs. The bony changes were especially interesting. Serial roentgenographs showed a progressive persistent bony thickening of the humerus, radius and ulna, also of the metacarpals and phalanges, with regions of diminished density of bone in the cortex. After amputation of the arm there was a periosteal hyperplasia of the humeral stump, and similar changes of the clavicles, edges of scapulae, left arm, forearm, wrist, hand and fingers, the periosteal changes being sufficiently characteristic of the so-called chronic pulmonary osteoarthropathy to suggest a causal lesion somewhere in the respiratory tract. The lower extremities also showed periosteal hyperplasia.—*Unusual Bone Changes Caused by a Small Primary Bronchiogenic Carcinoma, H. B. Thomas, E. F. Hirsch and E. S. Blaine, J. Am. M. Ass., January 14, 1928, xc, 89.*—(*G. L. L.*)

**Fibroma of Bronchus.**—A fibroma, in a bronchus in a woman aged 23, gave rise to practically continuous haemoptyses over a period of eighteen weeks. There was little or no constitutional reaction. The diagnosis was made by X-ray following lipiodol injection. The growth was removed through a bronchoscope and its histological characteristics determined.—*A Case of Fibroma of the Bronchus, L. S. T. Burrell and R. R. Trail, Lancet, December 3, 1927, ccxiii, 1180.*—(*B. T. McM.*)

**Hodgkin's Disease and Fibroid Phthisis.**—Clinically, the patient had an enormous adenopathy of the cervical lymph nodes, moderate splenomegaly, transitory pruritus, eosinophilia in the blood, asthenia, cachexia, severe anaemia and undulating fever. The patient had been suffering from a chronic fibroid pulmonary tuberculosis for over ten years. Microscopically, caseating lesions were found in the lung and liver. Coexistent with the caseated lesions, malignant granulomatosis was found in the tracheobronchial and mesenteric lymph glands and in the spleen. Numerous tubercle bacilli were present in the caseating areas. There were numerous emboli due to Sternberg's cells. The authors believe that malignant granulomatosis consists of an inflammatory hyperplasia attacking at first the reticulo-endothelial system and later becoming frankly cancerous.—*Un cas de granulomatose maligne (sarcome atypique) chez un malade atteint de tuberculose pulmonaire fibreuse, Marchal, Moussoir and Tchou, Meeting, Soc. Méd. d. Hôp., February 3, 1928, reported in Prog. Méd., February 18, 1928, no. 7, 290.*—(*U. E. Z.*)

**Hodgkin's Disease and Serofibrinous Pleurisy.**—In a patient suffering from Hodgkin's disease, the clinical picture, for a long time, was that of left-sided pleurisy with effusion. Four thoracenteses were done and the fluid removed on the last puncture showed a marked lymphocytosis. Guinea-pig inoculation was repeatedly negative. A little later in the course of the disease there occurred enlargement of the cervical lymph nodes, generalized pruritus and, radioscopically, a mediastinal mass was demonstrated. Biopsy was done and Sternberg cells were found in large numbers. Because of the febrile reaction, the persistence of the pleural exudate and the presence of lymphocytes in the fluid, tuberculosis was diagnosed. Pleural effusions in Hodgkin's disease usually occur very late.—*Lymphogranulomatose avec pleurésie séro-fibrineuse récidivante, Pruvost and Hesse, Meeting, Soc. Méd. des Hôp., January 20, 1928, reported in Prog. Méd., January 28, 1928, no. 4, 159.*—(*U. E. Z.*)

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